

AMENDMENTS TO THE CLAIMS

1-96. (Canceled)

97. (Currently Amended) A method for decreasing neuronal cell death associated with a neuropathy, comprising administering to a subject afflicted with or at risk of being afflicted with a neuropathy ~~contacting a neuronal cell with~~ a morphogen comprising a dimeric protein, the dimeric protein having one or more of the following:

- (1) a conserved C-terminal six-cysteine skeleton 60% identical to residues 43-139 of SEQ ID NO: 5;
- (2) a conserved C-terminal seven-cysteine skeleton 70% homologous to residues 38-139 of SEQ ID NO: 5;
- (3) a conserved C-terminal six-cysteine skeleton 70% homologous to residues 43-139 of SEQ ID NO: 5; or
- (4) an amino acid sequence of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP6; ~~and~~

wherein the morphogen (i) stimulates the production of an N-CAM or L1 isoform in said neuronal cell, and (ii) decreases neuronal cell death associated with a neuropathy.

98. (Canceled)

99. (Currently Amended) A method for decreasing neuronal cell death associated with a chemical or physical injury, comprising administering to a subject afflicted with or at risk of being afflicted with a chemical or physical injury ~~contacting a neuronal cell with~~ a morphogen comprising a dimeric protein with:

- (1) a conserved C-terminal six-cysteine skeleton 60% identical to residues 43-139 of SEQ ID NO: 5;
- (2) a conserved C-terminal seven-cysteine skeleton 70% homologous to residues 38-139 of SEQ ID NO: 5;
- (3) a conserved C-terminal six-cysteine skeleton 70% homologous to residues 43-139 of SEQ ID NO: 5; or

- (4) an amino acid sequence of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP6; and wherein the morphogen (i) stimulates the production of an N-CAM or L1 isoform in said neuronal cell, and (ii) decreases neuronal cell death associated with a chemical or physical injury.

100-104.(Canceled)

105. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is human OP-1.
106. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is mouse OP-1.
107. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, BMP2A, BMP2B, Vg1, Vgr-1, BMP5, or BMP6.
108. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is human OP-1, mouse OP-1, human OP-2, mouse OP-2, BMP5, or BMP6.
109. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is a dimeric protein having a conserved C-terminal six-cysteine skeleton 60% identical to residues 43-139 of SEQ ID NO: 5.
110. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is a dimeric protein having a conserved C-terminal seven-cysteine skeleton 70% homologous to residues 38-139 of SEQ ID NO: 5.
111. **(Currently Amended)** The method of any of claims 97 or 99 97, 99, 112 and 113, wherein the morphogen is a dimeric protein having a conserved C-terminal six-cysteine skeleton 70% homologous to residues 43-139 of SEQ ID NO: 5.
112. **(New)** A method for decreasing neuronal cell death associated with a neuropathy, comprising contacting a neuronal cell damaged by or at risk of being damaged by a neuropathy with a morphogen comprising a dimeric protein, the dimeric protein having one or more of the following:

- (1) a conserved C-terminal six-cysteine skeleton 60% identical to residues 43-139 of SEQ ID NO: 5;
- (2) a conserved C-terminal seven-cysteine skeleton 70% homologous to residues 38-139 of SEQ ID NO: 5;
- (3) a conserved C-terminal six-cysteine skeleton 70% homologous to residues 43-139 of SEQ ID NO: 5; or
- (4) an amino acid sequence of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP6; and

wherein the morphogen (i) stimulates the production of an N-CAM or L1 isoform in said neuronal cell, and (ii) decreases neuronal cell death associated with a neuropathy.

113. (New) A method for decreasing neuronal cell death associated with a chemical or physical injury, comprising contacting a neuronal cell damaged by or at risk of being damaged by a chemical or physical injury with a morphogen comprising a dimeric protein with:

- (1) a conserved C-terminal six-cysteine skeleton 60% identical to residues 43-139 of SEQ ID NO: 5;
- (2) a conserved C-terminal seven-cysteine skeleton 70% homologous to residues 38-139 of SEQ ID NO: 5;
- (3) a conserved C-terminal six-cysteine skeleton 70% homologous to residues 43-139 of SEQ ID NO: 5; or
- (4) an amino acid sequence of human OP-1, mouse OP-1, human OP-2, mouse OP-2, 60A, GDF-1, BMP2A, BMP2B, DPP, Vg1, Vgr-1, BMP3, BMP5, or BMP6; and

wherein the morphogen (i) stimulates the production of an N-CAM or L1 isoform in said neuronal cell, and (ii) decreases neuronal cell death associated with a chemical or physical injury.